

- 2 -

Amendment to the Specification

1. Please replace paragraph [0004] on page 1-2 of the specification with the following replacement paragraph.

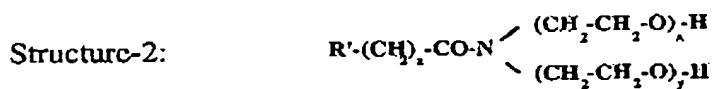
[0004] One embodiment of the invention provides emulsion compositions suitable for use at start-up of a reformer of a fuel cell system comprising hydrocarbon, water and at least one surfactant from each of two types of surfactants. One type of surfactant (Type-A) is selected from the group consisting of alkoxylated alkyl alcohols, alkoxylated alkyl monoesters and alkoxylated alkyl diesters. The other type of surfactant (Type-B) is selected from ethoxylated alkyl ~~amid~~ amide surfactants. In a preferred embodiment, the emulsion composition is a complex water-in-oil-in-water emulsion.

2. Please replace paragraph [0018] on page 7 of the specification with the following replacement paragraph:

[0018] An essential component of the emulsion composition of the instant invention is a surfactant mixture comprising at least one surfactant from each of two types of surfactants. One type of surfactant (Type-A) is selected from the group consisting of alkoxylated alkyl alcohols, alkoxylated alkyl monoesters and alkoxylated alkyl diesters. The other type of surfactant (Type-B) is selected from ethoxylated alkyl ~~amid~~ amide surfactants.

3. Please replace paragraph [0020] on page 8 with the following replacement paragraph:

[0020] Type-B surfactants comprise ethoxylated alkyl ~~amid~~ amide surfactants having the general chemical structure shown below:



- 3 -

Where R' is a methyl group, z is an integer from about 5 to 20, the sum of x and y is from 2 to 50.

4. Please replace paragraph [0021] on pages 8-9 with the following replacement paragraph:

[0021] The term "alkyl" in the alkoxylated alkyl alcohols, alkoxylated alkyl monoesters, alkoxylated alkyl diesters and ethoxylated alkyl amid amide surfactants are meant to represent saturated alkyl hydrocarbons, unsaturated alkyl hydrocarbons or mixtures thereof. Preferably the Type-A and type-B surfactants decompose in the temperature range of 250°C to 700°C. Preferably at about 700°C substantially all of the surfactant is decomposed. The total concentration of Type A plus Type -B surfactants in the emulsion composition is in the range of 0.05 to 1wt%. The ratio of Type-A to Type-B can be in the range of 1:1 to 1:4 i.e., equal amounts of Type-A and Type-B surfactants to four times more Type-B surfactant than Type-A surfactant. The preferred ratio of Type-A to Type-B surfactant is 1:1 to 1:2 and more preferred is 1:1 of Type-A to Type-B surfactants.

5. Please replace Table-1 on page 12 with the following replacement table.

- 4 -

Table -1

<u>Solution</u>	<u>Interfacial tension</u> (dynes/cm)
Naphtha / Water	53.02
Naphtha / Water + 1 wt% alkoxylated alkyl alcohol (structure 1a), n= 17; m=2, M is CH ₂ -CH ₂) added to naphtha	1.51
Naphtha / Water + 1 wt% alkoxylated alkyl esters (structure 1b) , n= 10; m=6, M is CH ₂ -CH ₂) added to water	0.86
Naphtha / Water + 1 wt% ethoxylated alkyl <u>amid</u> <u>amide</u> (structure 2, z = 17; x+y-7) <0.5 added to naphtha	<0.5

6. Please replace paragraph [0032] on page 14 with the following replacement paragraph:

[0032] 0.6g of polyethylene glycol 600 monolaurate (sold by Henkel Corporation as Emerest 2661 (structure 1b) , n= 10; m=6) and 0.4 g of polyethylene glycol 200 dilaurate (sold by Henkel Corporation as Emerest 2622 (structure 1c), n= 10; m=2) Type-A surfactants were added 61g isoctane (dyed orange) and 39g water (dyed blue) and mixed using a Fisher Hematology/Chemistry Mixer Model 346. Mixing was

- 5 -

conducted for 5 minutes at 25°C. The mixture was allowed to stand for 30 minutes. A water-in-oil emulsion with excess water splitting out was observed. To this mixture was added 0.5 g of alkyl ethoxylated amide amide (structure-2, z = 17; x+y =7); sold as Ethomid C-12 by Azko Nobel Company, Chicago IL, and the mixture mixed again as described above. A milky white emulsion was observed with no phase separation even after 6 hours of standing. Using a Leitz optical microscope the emulsion was characterized as a macro-macro W/O/W emulsion as described in Example-3. The conductivity of water was recorded as 47 micro mho, naphtha as 0.1 micro mho and the emulsion 38 micro mho confirming the water continuity as described in Example-4.